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09/871,171	05/31/2001	Mary Lucille DeLucia	KCC-15,135	9932

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EXAMINER

ROSSI, JESSICA

ART UNIT PAPER NUMBER

1733

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,171

Applicant(s)

DELUCIA ET AL.

Examiner

Jessica L. Rossi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/14/05, RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,11-17,19,20,42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

RCE

1. The request filed on 4/14/05 for an RCE under 37 CFR 1.114 based on parent Application No. 09/871,171 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. This action is in response to the amendment dated 3/14/05. Claims 23-31 were cancelled. Claims 1-2, 4-6, 11-17, 19-20 and 42-43 are pending.

3. The rejection of claims 1, 5-6, 11, 16-17, 19-20 and 42-43 under 35 U.S.C. 103(a) as being unpatentable over Ekdahl (US 5674211) in view of the collective teachings of Schwinn et al. (DE 19523497) and Zelazoski (GB 2284786), as set forth in paragraph 6 of the previous office action, has been withdrawn in light of Applicant's arguments set forth on pages 6-7 of the remarks dated 3/14/05.

4. The rejection of claims 1-2, 4-6, 11-17, 19-20 and 42-43 under 35 U.S.C. 103(a) as being unpatentable over Newman (US 3622434) in view of Wu (US 5422172) and Ekdahl, as set forth in paragraph 8 of the previous office action, has been withdrawn in light of the present amendment and Applicant's arguments set forth in the 3rd paragraph on page 8 of the remarks dated 3/14/05.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu (US 5422172; of record).

With respect to claim 1, Wu is directed to a method for producing a structured composite material having a plurality of apertures for accommodating passage of fluids (note fluids can be liquids and/or gases) through the material (abstract; column 3, lines 20-23). The reference teaches forming a thermoplastic nonwoven fibrous web 9 having a first shrinkage extent (note a material that is non-shrinkable has a shrinkage extent equal to zero), extruding a thermoplastic film 3 having a shrinkage extent different from that of the fibrous web onto the fibrous web (note film is stretched and then allowed to retract = shrink; Figure 1; column 2, lines 40-44 and 53-59; column 3, lines 29-32), forming a plurality of apertures in the film after extrusion (note apertures formed mechanically and this would only be possible after extrusion takes place since no film exists until then; column 3, lines 20-23), and differentially shrinking the film relative to the fibrous web to increase a bulk of the composite (column 2, lines 55-59).

Regarding claims 16-17, Wu teaches such (column 3, lines 41-42 and 54-55).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 4, 11-15, 19-20 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu.

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Regarding claim 2, Wu teaches using mechanical methods to aperture the film (column 3, lines 20-22). Selection of a particular mechanical method would have been within purview of the skilled artisan.

Regarding claim 4, it would have been obvious to form apertures through the fibrous web because this would improve the air permeability of the composite.

Regarding claim 11, selection of an aperture size would have been within purview of the skilled artisan depending on the desired degree of fluid permeability.

Regarding claim 12, selection of a particular method for aperturing the film would have been within purview. However, slitting is a known aperturing technique in the art and therefore it would have been obvious to use this technique to form the apertures in the film of Wu wherein the skilled artisan would have appreciated the slits being opened upon differential shrinking of the composite.

Regarding claim 13, Wu teaches using mechanical methods to aperture the film (column 3, lines 20-22). Selection of a particular mechanical method for forming the slits would have been within purview of the skilled artisan.

Regarding claim 14, selection of a particular orientation for the slits would have been within purview of the skilled artisan.

Regarding claim 15, it would have been obvious to form slits through the nonwoven because this would improve the air permeability of the composite.

Regarding claim 19, it would have been obvious to the skilled artisan to incorporate filler into the film of Wu because such is a notoriously well-known and conventional technique for imparting certain desirable characteristics to a film.

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Regarding claim 20, selection of particular filler would have been within purview of the skilled artisan depending the properties to be imparted to the film.

Regarding claims 42-43, the percentage increase in bulk would have been within purview of the skilled artisan depending on the desired softness.

9. Claims 1-2, 5-6, 11-14, 16-17, 19-20 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (WO 00/38918) in view of Haffner et al. (US 5514470).

With respect to claim 1, Taylor is directed to a method for producing a structured composite material having a plurality of apertures for accommodating passage of fluids through the material (abstract; p. 16, lines 1-9). The reference teaches forming a thermoplastic nonwoven fibrous web having a first shrinkage extent (p. 7, line 22 – p. 8, line 3), providing a thermoplastic film/elastic sheet having a shrinkage extent different from that of the fibrous web onto the fibrous web (p. 8, line 18 – p. 9, line 15), point bonding the film to the fibrous web while simultaneously forming a plurality of apertures in the film (p. 14, lines 8-13; p. 16, lines 1-9), and differentially shrinking the film relative to the fibrous web to increase a bulk of the composite (p. 14, lines 14-15).

Taylor teaches that the film can be pre-formed by extrusion and wound onto a supply roll. Or, the film can be extruded just prior (in the same processing step) to lamination with the fibrous web (p. 14, lines 3-5). In regards to the latter method, the reference is not clear as to whether or not the film is extruded onto the fibrous web.

It is known in the structured composite material art to extrude a thermoplastic film/elastic sheet onto a nonwoven fibrous web where the film remains unbonded to the fibrous web until the film and fibrous web pass between opposed rollers, which can be patterned rollers that point

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bond the film and web or smooth rollers that continuously bond the film and web, as taught by Haffner (Figures 4 and 6; column 1, lines 16-30; column 3, lines 23-27; column 4, lines 16-26; column 7, lines 59-61; column 8, lines 47-53; column 10, lines 21-57; column 14, lines 32-45; column 16, lines 15-31).

Therefore, it would have been obvious to the skilled artisan at the time the invention was made to extrude the film/elastic sheet of Taylor onto the fibrous web such that the film remains unbonded to the web until the point bonding process of Taylor takes place because such is known in the art, as taught by Haffner, where this simplifies the process by eliminating the need to extrude the film onto a moving support which then places the film into contact with the fibrous web so that bonding can take place.

Regarding claim 2, Taylor teaches such (p. 16, lines 1-5).

Regarding claims 5-6, Taylor teaches such (p. 14, lines 14-23).

Regarding claim 11, selection of an aperture size would have been within purview of the skilled artisan depending on the desired degree of fluid permeability.

Regarding claim 12, selection of a particular method for aperturing the film would have been within purview. However, slitting is a known aperturing technique in the art and therefore it would have been obvious to use this technique to form the apertures in the film of Taylor wherein the skilled artisan would have appreciated the slits being opened upon differential shrinking of the composite.

Regarding claim 13, selection of a particular mechanical method for forming the slits would have been within purview of the skilled artisan.

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Regarding claim 14, selection of a particular orientation for the slits would have been within purview of the skilled artisan.

Regarding claims 16-17, Taylor teaches such (p. 8, lines 1; p. 9, lines 10-18).

Regarding claim 19, Taylor teaches such (p. 9, line 24).

Regarding claim 20, selection of particular filler would have been within purview of the skilled artisan depending the properties to be imparted to the film.

Regarding claims 42-43, the percentage increase in bulk would have been within purview of the skilled artisan depending on the desired softness.

10. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. and Haffner et al. as applied to claims 1 and 12 above, and further in view of Curro et al. (US 5700255).

Regarding claims 4 and 15, Taylor is silent as to forming apertures through the fibrous web.

Taylor teaches using the structured composite material as waistbands and side panels in personal care products (p. 16, lines 5-9). It is known in the art to make structured composite materials for use as waistbands and side panels in personal care products by bonding an elastic/film sheet 76 to a nonwoven fibrous web 77 and then shrinking the film 76 relative to the fibrous web to increase the bulk of the composite where both the film and fibrous web have apertures, as taught by Curro (Figure 2; column 1, lines 15-16; column 5, lines 1-9; column 9, lines 38-46; column 10, lines 13-63; column 10 line 65 – column 11, line 1; column 11, lines 33-35 and 43-50).

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Therefore, it would have been obvious to the skilled artisan at the time of the invention to also form apertures in the fibrous web of Taylor because such is known in the art, as taught by Curro, where this improves the breathability of the composite.

11. Claims 1-2, 4, 11-17, 19-20 and 42-43 rejected under 35 U.S.C. 103(a) as being unpatentable over Curro et al. in view of Mokry (US 5032121) and Wu.

With respect to claim 1, Curro is directed to a method for producing a structured composite material having a plurality of apertures for accommodating passage of fluids through the material (abstract; column 1, lines 15-16; column 9, lines 39-46). The reference teaches forming a thermoplastic nonwoven fibrous web 77 having a first shrinkage extent (column 11, lines 34-35 and 43-50), providing a thermoplastic film/elastic sheet 76 having a shrinkage extent different from that of the fibrous web onto the fibrous web (column 10, line 64 – column 11, line 2), bonding the film to the fibrous web while simultaneously forming a plurality of apertures in the film (column 9, lines 39-46), and differentially shrinking the film relative to the fibrous web to increase a bulk of the composite (Figure 2; column 10, lines 10-63).

The reference is silent as to extruding the film onto the fibrous web.

It is known in the art to make structured composite materials for use as waistbands and side panels in personal care products by extruding an elastic/film onto a web where upon cooling the film shrinks relative to the web to increase the bulk of the composite where this eliminates the need for a separate step of adhesively bonding strips of elastic to the web, as taught by Mokry (column 5, lines 45-50).

One reading Curro as a whole would have appreciated the reference not being limited to a particular method for shrinking the film (column 10, lines 10-51) and therefore would have been

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motivated to extrude the film onto the fibrous web where upon cooling the film shrinks relative to the fibrous web because such is known in the art, as taught by Mokry, and this eliminates the need for a separate step of adhesively bonding strips of elastic to the web.

Regarding claim 2, Curro teaches such (column 9, lines 45-46).

Regarding claim 4, Curro teaches such (column 11, lines 34-35 and 43-50).

Regarding claim 11, selection of an aperture size would have been within purview of the skilled artisan depending on the desired degree of fluid permeability.

Regarding claim 12, selection of a particular method for aperturing the film would have been within purview. However, slitting is a known aperturing technique in the art and therefore it would have been obvious to use this technique to form the apertures in the film of Curro wherein the skilled artisan would have appreciated the slits being opened upon differential shrinking of the composite.

Regarding claim 13, selection of a particular mechanical method for forming the slits would have been within purview of the skilled artisan.

Regarding claim 14, selection of a particular orientation for the slits would have been within purview of the skilled artisan.

Regarding claim 15, Curro teaches such (column 11, lines 34-35 and 43-50).

Regarding claims 16-17, selection of particular materials within purview of the skilled artisan.

Regarding claim 19, it would have been obvious to the skilled artisan to incorporate filler into the film of Curro because such is a notoriously well-known and conventional technique for imparting certain desirable characteristics to a film.

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Regarding claim 20, selection of particular filler would have been within purview of the skilled artisan depending the properties to be imparted to the film.

Regarding claims 42-43, the percentage increase in bulk would have been within purview of the skilled artisan depending on the desired softness.

12. Claims 1-2, 5-6, 11-14, 16-17, 19-20 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 2223780 in view of the collective teachings of Wu and Taylor et al.

With respect to claim 1, DE '780 is directed to a method for producing a structured composite material by forming a thermoplastic nonwoven fibrous web 7 having a first shrinkage extent, extruding a thermoplastic film 6 having a shrinkage extent different from that of the fibrous web onto the fibrous web, and differentially shrinking the film relative to the fibrous web to increase a bulk of the composite (Figures 1-2; abstract and oral translation).

The reference is silent as to the composite having a plurality of apertures for accommodating passage of fluids and forming the apertures through the film after extrusion.

It is known in the art to form a structured composite material having a plurality of apertures for accommodating passage of fluids by forming a plurality of apertures through the film layer, and in the case of a film layer that is extruded onto the fibrous web forming them after extrusion, where the bulk of the composite is increased by shrinking the film relative to the fibrous web, as taught by the collective teachings of Wu (see paragraph 6 above) and Taylor (see paragraph 9 above).

It would have been obvious to the skilled artisan to form apertures through the film of DE '780 after extrusion thereof because such is known in the art, as taught by the collective teachings of Wu and Taylor, where this imparts breathability to the composite.

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Regarding claim 2, Taylor teaches such.

Regarding claims 5-6, DE '780 teaches such.

Regarding claim 11, selection of an aperture size would have been within purview of the skilled artisan depending on the desired degree of fluid permeability.

Regarding claim 12, selection of a particular method for aperturing the film would have been within purview. However, slitting is a known aperturing technique in the art and therefore it would have been obvious to use this technique to form the apertures in the film of DE '780 wherein the skilled artisan would have appreciated the slits being opened upon differential shrinking of the composite.

Regarding claim 13, selection of a particular mechanical method for forming the slits would have been within purview of the skilled artisan.

Regarding claim 14, selection of a particular orientation for the slits would have been within purview of the skilled artisan.

Regarding claims 16-17, selection of particular materials within purview of the skilled artisan.

Regarding claim 19, it would have been obvious to the skilled artisan to incorporate filler into the film of Curro because such is a notoriously well-known and conventional technique for imparting certain desirable characteristics to a film.

Regarding claim 20, selection of particular filler would have been within purview of the skilled artisan depending the properties to be imparted to the film.

Regarding claims 42-43, the percentage increase in bulk would have been within purview of the skilled artisan depending on the desired softness.

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13. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE '780 and the collective teachings of Wu and Taylor et al. as applied to claim 1 above, and further in view of Curro.

Regarding claims 4 and 15, DE '780 is silent as to forming apertures through the fibrous web.

It is known in the art to make structured composite materials by bonding a film to a nonwoven fibrous web and then shrinking the film relative to the fibrous web to increase the bulk of the composite where both the film and fibrous web have apertures, as taught by Curro (Figure 2; column 1, lines 15-16; column 5, lines 1-9; column 9, lines 38-46; column 10, lines 13-63; column 10 line 65 – column 11, line 1; column 11, lines 33-35 and 43-50).

Therefore, it would have been obvious to the skilled artisan at the time of the invention to also form apertures in the fibrous web of DE '780 because such is known in the art, as taught by Curro, where this improves the breathability of the composite.

Response to Arguments

14. Applicant's arguments filed 3/14/05 have been fully considered but they are not persuasive.

15. In the 4th paragraph on page 8 of the remarks, Applicant argues that Wu teaches extruding the nonwoven onto the film instead of the other way around.

The examiner points out that Applicant is incorrect. Wu teaches introducing a nonwoven fibrous web 9 into a nip of rollers and extruding an elastomeric extrudate 1 onto the fibrous web to form a film 3 laminated to the fibrous web (Figure 1; column 2, lines 40-44; column 3, lines 29-32).

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16. In the 4th paragraph on page 8 of the remarks, Applicant argues that Wu does not teach apertures formed in the film after extrusion of the film onto the nonwoven web.

The examiner points out that Wu teaches forming the apertures by mechanical means (column 3, lines 20-23) and therefore the skilled artisan would have appreciated that this could only take place after extrusion of the elastomeric extrudate to form the film. It is pointed out that Applicant himself came to such a logical conclusion regarding extruded films and forming apertures therein (1st paragraph on page 5 of the remarks).

17. In the 4th paragraph on page 8 of the remarks, Applicant argues that Wu does not teach 1) a heat shrinkable film or 2) a film layer having a shrinkage extent.

The examiner points out that the first argument is not commensurate with the scope of the invention being claimed in claim 1. The examiner also points out that a non-shrinkable layer has a shrinkage extent equal to zero. Regardless, Wu teaches stretching the film and then releasing this tension so that the film retracts (= shrinks) – it being noted once again that claim 1 is not limited to heat shrinking.

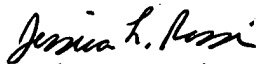
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jessica L. Rossi
Primary Examiner
Art Unit 1733